## Model PRO 9544FT

Installation Manual



#### **SELECTABLE FEATURES**

**Note :** The method of manual override can either be selected to operate from the valet switch or operate as custom code. Be certain to place a check mark indicating the method used in the box located on the last page of the owner's manual.

**Dip Switch Selectable Features:** 

Switch Number ON Position OFF Position Factory Default

Dip Switch 1 Custom Code Override Valet Switch Override Valet Switch Override

Dip Switch 2 Voltage Sense Hardwire Voltage Sense

Note: When both Passive Arming and Voltage Sensing are selected, you must hardwire the driver's door pin switch in order to

begin the passive arming sequence.

**RF Programmable Features:** 

Feature Selection 1 Chirp 2 Chirps Default

First 1 Second Door Locks 3.5 Second Door Locks 1 Second

Second Auto Lock On Auto Lock Off Auto Lock Off Third Auto Unlock On Auto Unlock Off Auto Unlock Off Fourth Headlight Output On Headlight Output Off Headlight On Fifth Passive Door Locks Active Door Locks Passive Locks

Sixth Passive Arming Active Arming Active Arming

To program these selectable features;

Action System Response

Turn ignition on No response

Flip valet switch on then off 3 times 1 Chirp - LED 1 flash

Within 3 seconds, turn ignition Off Short chirp, then long chirp

First Then On 1 chirp = 1 second door locks

Press transmitter Arm/Disarm button to change 2 chirps = 3.5 second door locks

or

Second Flip valet switch on then off 2 chirps = auto locks off

Press transmitter Arm/Disarm button to change 1 chirp = auto locks on

or

Third Flip valet switch on then off 2 chirps = auto unlock off

Press transmitter Arm/Disarm button to change 1 chirp = auto unlock on

or

Fourth Flip valet switch on then off 1 chirp = headlight output on

Press transmitter Arm/Disarm button to change 2 chirps = headlight output off

or

Fifth Flip valet switch on then off 1 chirp = passive locks

Press transmitter Arm/Disarm button to change 2 chirps = active locks

or

Sixth Flip valet switch on then off 1 chirp = passive arming

Press transmitter Arm/Disarm button to change 2 chirps = active arming

or

Flip valet switch on then off Exit program mode

Turn ignition key off Exit program mode

**Note :** Once you enter the feature programming mode, do not allow more than 15 seconds to pass between steps, or the programming will be terminated.

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#### **INSTALLATION OF MAJOR COMPONENTS**

#### **Control Module:**

Select a mounting location inside the passenger compartment (up behind the dash), and secure using the two screws provided. The control module can also be secured in place using cable ties.

**Do not** mount the control module in the engine compartment, as it is not waterproof. You should also avoid mounting the unit directly onto factory installed electronic components. These components may cause RF interference, which can result in poor transmitter range or intermittent operation.

#### Siren

Select a mounting location in the engine compartment that is well protected from access below the vehicle. Avoid areas near high heat components or moving parts within the engine compartment. To prevent water retention, the flared end of the siren must be pointed downward when mounted.

Mount the siren to the selected location using the screws and bracket provided.

#### **Hood or Trunk Pin Switch:**

A pin switch is included for use in protecting the hood or trunk (or hatchback) of the vehicle. The switch must always be mounted to a grounded, metal surface of the vehicle. It is important to select a location where water cannot flow or collect, and to avoid all drip gutters on hood and trunk fender walls. Choose locations that are protected by rubber gaskets when the hood or trunk lid is closed.

The pin switch can be mounted using the bracket provided, or direct mounted by drilling a  $\frac{1}{4}$  " diameter mounting hole. Keep in mind that when properly mounted, the plunger of the pin switch should depress at least  $\frac{1}{4}$  " when the hood or trunk lid is closed.

#### Dash Mounted L.E.D.:

A small red L.E.D. is included that will serve as a visual indicator of the alarm status. It should be installed in the dash, located where it can be easily seen from outside the vehicle, yet not be distracting to the driver.

Once a location has been selected, check behind the panel for wire routing access, and to confirm the drill will not damage any existing components as it passes through the panel.

Drill a ¼ "diameter hole, and pass the red and blue wires from the L.E.D. through the hole, from the front of the panel. Firmly press the body of the L.E.D. into the hole until fully seated.

#### Valet Switch:

Select a mounting location for the switch that is easily accessible to the driver of the vehicle. The switch does not have to be concealed, however, concealing the switch is always recommended, as this provides an even higher level of security to the vehicle.

The valet switch can be mounted to the lower side of the dash by drilling a  $\frac{1}{4}$  " diameter hole in the selected location.

Be sure to check behind the dash for adequate clearance for the body of the switch, and to confirm that the drill will not damage any existing components as it passes through the dash. You should also make certain that the back of the switch is accessible for wiring later in the installation.

#### **OPTIONAL Shock Sensor:**

Select a solid mounting surface for the shock sensor on the firewall inside the passenger compartment, and mount the sensor using the two screws provided. The shock sensor can also be secured to any fixed brace behind the dash using tie straps.

Whichever mounting method is selected, make certain that the sensitivity adjustment is accessible for use later in the installation.

#### **WIRING THE SYSTEM**

# Large 8 Pin Edge Connector:

Red Fused Wire: + 12 VDC Constant Battery Source

This wire controls the sensitivity of the voltage sensing circuit, which detects the turning on of an interior light when a door is opened. It will also detect the switching on of parking or headlamps, and in many cases will trigger the alarm when a thermostatically controlled electronic radiator cooling fan switches on.

When installing this system into vehicles with electronic "after fans ", it is recommended you disable the voltage sense circuit.

In voltage sensing applications, the closer to the battery that the red wire is connected, the less sensitive the voltage sense circuitry will be. Moving this connection point to the fuse panel will increase the sensitivity, and connecting to the courtesy lamp fuse in the vehicle will provide maximum sensitivity of the voltage sense circuit.

When hardwiring the control module to pin switches at all entry points, the voltage sense circuit must be disabled. Move dip switch # 2 to the off position, then connect the red wire to a + 12 VDC constant battery source.

White Wire: + 12 VDC Pulsed Parking Light Output (15 Amp Max)

This wire is provided to flash the vehicle's parking lights. Connect the white wire to the positive side of one of the vehicle's parking lights.

Black Wire: Chassis Ground

Connect this wire to a solid, metal part of the vehicle's chassis. Do not confuse this wire with the thin black antenna wire that exits the control module independently.

White w/ Black Trace Wire: Positive Output to Siren

Route this wire through a rubber grommet in the firewall, and to the siren location.

Connect the white / black wire to the positive wire of the siren. Secure the black ground wire of the siren to chassis ground.

Dark Blue Wire: Delayed 300 mA Pulsed Output / Channel 2

The dark blue wire pulses to ground via an independent RF channel from the keychain transmitter. This is a transistorized, low current output, and should only be used to drive an external relay coil.

**WARNING:** Connecting the dark blue wire to the high current switched output of trunk release circuits, some remote start trigger inputs, will damage the control module.

Connect the dark blue wire to terminal 86 of the AS - 9256 relay (or equivalent 30 A automotive relay), and wire the remaining relay contacts to perform the selected function of channel 2.

Dark Green w/ White Trace Wire: Entry Illumination (300 mA max.)

The dark green w/ white trace wire provides a 30 second ground signal whenever the system is disarmed, and pulses ground whenever the system is triggered.

It should be used to provide the (optional) entry lighting, and to flash the vehicle's dome light while the alarm is sounding. This is a transistorized, low current output, and should only be used to drive an external relay coil.

Connect the dark green with white trace wire to terminal 86 of the AS - 9256 relay ( or equivalent 30 A automotive relay ), and wire the remaining relay contacts according to the polarity of the dome light circuit in the vehicle.

NOTE: When wiring this feature in vehicles with factory equipped delay lighting circuits, it is best to connect to the output of the timer which feeds the dome light, rather than at the door switch. This will ensure that the dome light pulses when the alarm is triggered.

## Orange Wire: 300 mA Ground Output When Armed - N. C. Starter Disable

This wire is provided to control the starter cut relay. Connect the orange wire to terminal 86 of the relay. Connect relay terminal 85 to an ignition wire in the vehicle that is live when the key is in the on and crank positions, and off when the key is in the off position. (This is where the yellow wire from the alarm should be connected).

Cut the low current starter solenoid wire in the vehicle, and connect one side of the cut wire to relay terminal 87A. Connect the other side of the cut wire to relay terminal 30.

Note: This is a normally closed starter cut arrangement, and when power is removed from the security system, the starter disable feature will not operate, allowing the vehicle to start. Audiovox does not recommend using the Orange wire to interrupt anything but the starting circuit of the vehicle.

## Mini 9 Pin Edge Connector:

## Light Green Wire: ( - ) Instant Trigger Zone 1

This is an instant on ground trigger wire. This wire (zone) should be reserved for connection to optional ground output trigger devices such as motion and / or shock impact sensors.

## White w/ Blue Trace Wire: Headlight Output - Arm & Disarm

The white w/ blue trace wire is provided to control the optional headlight illumination feature of the system. This is a transistorized, low current ( 300 mA ) output, and should only be used to drive an external relay coil.

This wire provides a 30 second ground signal whenever the system is remotely armed or disarmed..

Connect the white w/ blue trace wire to terminal 86 of the AS 9256 relay ( or an equivalent 30 Amp automotive relay ), and connect relay terminal 85 to a fused + 12 VDC battery source. Connect relay terminal 87 to one of the low beam headlight wires in the vehicle, and connect relay terminal 30 to either chassis ground or a fused ( 15 Amp Min ) + 12 VDC battery source, depending on the polarity of the headlight circuit in the vehicle.

## Yellow Wire: + 12 VDC Ignition Source

Connect this wire to a source that is live when the key is in the on and crank positions. Be sure that this source is off when the key is in the off position.

# Purple Wire: + Door Trigger

If the vehicle's door courtesy light switches have a + 12 volt output when the door is opened ( some Fords and some Imports ), you must connect this wire to the positive output from one of the door switches. In most cases, the purple wire will only need to be connected to one door switch, no matter how many doors the vehicle has.

**WARNING**: Do not use the purple wire if the vehicle has ground output type door switches. ( see Brown Wire).

#### Brown Wire: - Door Trigger

If the vehicle's courtesy light switches have a ( - ) ground output when the door is opened ( GM and most Imports ), you must connect this wire to the negative output from one of the door switches.

**WARNING**: Do not use the brown wire if the vehicle has + 12 volt output type door switches. ( see Purple Wire ).

#### Dark Green Wire: ( - ) Instant Trigger Zone 2

This is an instant on ground trigger wire. It must be connected to the previously installed hood and trunk pin switches.

## Black w/ White Trace Wire: 300 mA Horn Output

The black w/ white trace wire is provided to beep the vehicle's horn. This is a transistorized low current output, and should only be connected to the low current ground output from the vehicle's horn switch.

If the vehicle uses a + 12 VDC horn switch, then connect the black w/ white trace wire to terminal 86 of the AS 9256 relay (or an equivalent 30 Amp automotive relay), and connect relay terminal 85 to a fused + 12 VDC battery source. Connect relay terminal 87 to the vehicle's horn switch output, and connect relay terminal 30 to a fused + 12 VDC battery source.

## Dark Green w/ Black Trace Wire: Latching Output / Channel 3

The green w/ black trace wire latches to ground via an independent RF channel from the keychain transmitter. This is a transistorized, low current (300 mA) output, and should only be used to drive an external relay coil.

This wire provides an immediate ground signal, and stays at ground for as long as the button(s) on the keychain transmitter remain pressed.

# WARNING! Connecting the dark green w/ black trace wire to the high current switched output of trunk release circuits will damage the control module.

Connect the dark green w/ black trace wire to terminal 86 of the AS 9256 relay (or an equivalent 30 Amp automotive relay), and wire the remaining relay contacts to perform the selected function of channel 3.

## 2 Pin Blue Connector: Valet Switch

Route the grey and black wires in the 2 pin connector from the valet switch to the control module, and plug it into the mating blue connector on the side of the module.

#### 2 Pin White Connector: Dash Mounted L.E.D.

Route the red and blue wires in the 2 pin white connector from the L.E.D. to the control module, and plug it into the mating white connector on the side of the module.

# 4 Pin White Connector: Shock Sensor (OPTIONAL)

Route the red, black and green wires in the 4 pin white connector from the shock sensor to the control module, and plug one end into the shock sensor, and the other end into the mating white connector on the side of the module.

## Red & Green 2 Pin White Connector: Door Lock Outputs

These wires will provide either a pulsed ground output to the factory door lock control relay, or a pulsed + 12 volt output to the factory door lock control relay. In either case, the maximum current draw through these outputs must not exceed 300 mA.

# **3 Wire Ground Switched Door Locks**

In this application, the **red wire** provides a ground pulse during arming, or the **pulsed ground lock** output. Connect the red wire to the wire that provides a low current ground signal from the factory door lock switch to the factory door lock control relay.

The **green wire** provides a ground pulse during disarming, or the **pulsed ground unlock** output. Connect the green wire to the wire that provides a low current ground signal from the factory door unlock switch to the factory door lock control relay.

# 3 Wire Positive Switched Door Locks

In this application, the **red wire** provides a positive pulse during disarming, or the **pulsed + 12 volt unlock** output. Connect the red wire to the wire that provides a low current positive signal from the factory door unlock switch to the factory door lock control relay.

The **green wire** provides a positive pulse during arming, or the **pulsed + 12 volt lock** output. Connect the green wire to the wire that provides a low current positive signal from the factory door lock switch to the factory door lock control relay.

## 4 Wire Polarity Reversal and

# 5 Wire Alternating 12 Volt

# **Door Lock Control Circuits**

In these applications, the AS 9159 Door Lock Interface (or equivalent 30 A automotive relays) must be used. Refer to the AUDIOVOX Door Lock Wiring Supplement for proper connection to these types of circuits.

#### **COMPLETING THE INSTALLATION**

**Antenna Wire:** Be sure to extend the thin black antenna wire to it's full length, and cable tie into place where it cannot be damaged. Avoid wrapping this wire around major, high current wire looms.

**Adjusting the OPTIONAL Shock Sensor:** Using a small screwdriver, gently turn the adjustment screw fully counterclockwise. ( DO NOT over turn this screw. Maximum rotation for this adjustment is 270°). Close the hood and trunk lids, and arm the alarm. Wait 6 seconds for the accessories trigger zone to stabilize, then firmly strike the rear bumper with the side of a closed fist considering the amount of force required to break a window.

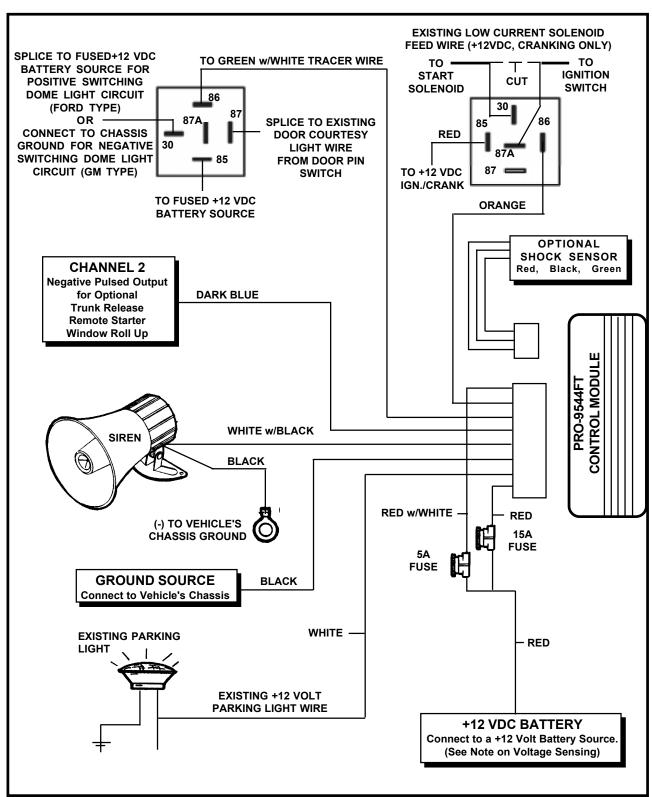
CAUTION: Never perform this test on the vehicle's glass, as you may break the window.

Turn the adjustment screw clockwise (increasing sensitivity) about ¼ turn and re - test. Repeat this procedure until the alarm sounds. Ultimately, one very firm strike to the rear bumper will cause the alarm to sound.

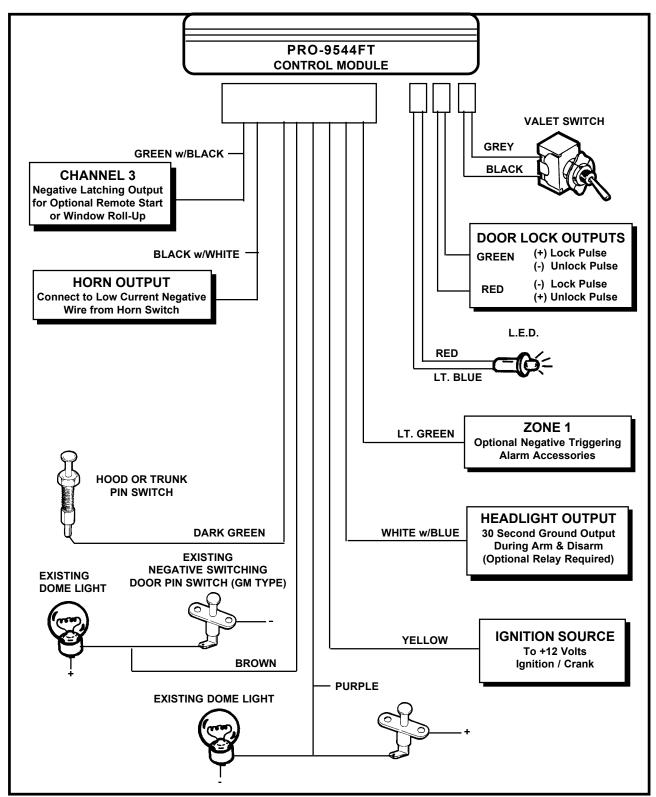
**WARNING!** Setting the sensitivity too high can cause false alarms due to noise vibrations from passing trucks and heavy equipment. To decrease sensitivity, turn the adjustment screw counter clockwise.

**Wire Dressing:** Always wrap the alarm wires in convoluted tubing, or with a spiral wrap of electrical tape. Secure these looms along the routing using cable ties. This will ensure that the alarm wires are not damaged by falling onto hot or sharp moving surfaces in the vehicle.

**Operation :** Take a few moments to check off the appropriate option boxes in the owner's manual, and to fully explain the operation of the system to your customer.



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